HG600/HG1000 SECTIONAL DOOR OPERATOR

USER'S MANUAL

CE Approved

ISO9001:2000

OUTLINE

1. Safety instructions……3

2. Description and features ……3

3. Technical specifications ……3

4. Check ……4

5. Installation and adjustment ……4

6. Programming ……8

7. External terminal connection ……11

8. Maintenance ……12

9. Troubleshooting ……12

1.Safety instructions

Carefully read and follow all safety precaution, warnings before attempting to install and use this sectional door operator, incorrect installation can lead to severe injury.

- The installation should be carried out by a qualified technician.
- To avoid electrical shock, disconnect the power cord from the mains power outlet before doing any repairs or removing the cover.
- Before installing, make sure that the door is in good mechanical condition, the door must be well balanced. Check that the door operates smoothly and easily.
- Before installing the operator, remove all unnecessary ropes and disable equipment, such as locks etc..
- The garage door should only be used when in full view of the door.
- No one or vehicle is allowed to enter or leave the garage while the remoter is being installed, do not allow children to play near the door.
- Locate any fixed control: within sight of door but away from all moving parts of the door and at a height of more than 1.5m above the ground to avoid children reaching it.
- Install and adjust the manual release so that the handle hangs less than 1.8m above the floor.

Failure to comply with the instructions above may result in personal injury or property damage. Our company does not accept responsibility for damage or injury resulting from installing this operator.

2. Description and features

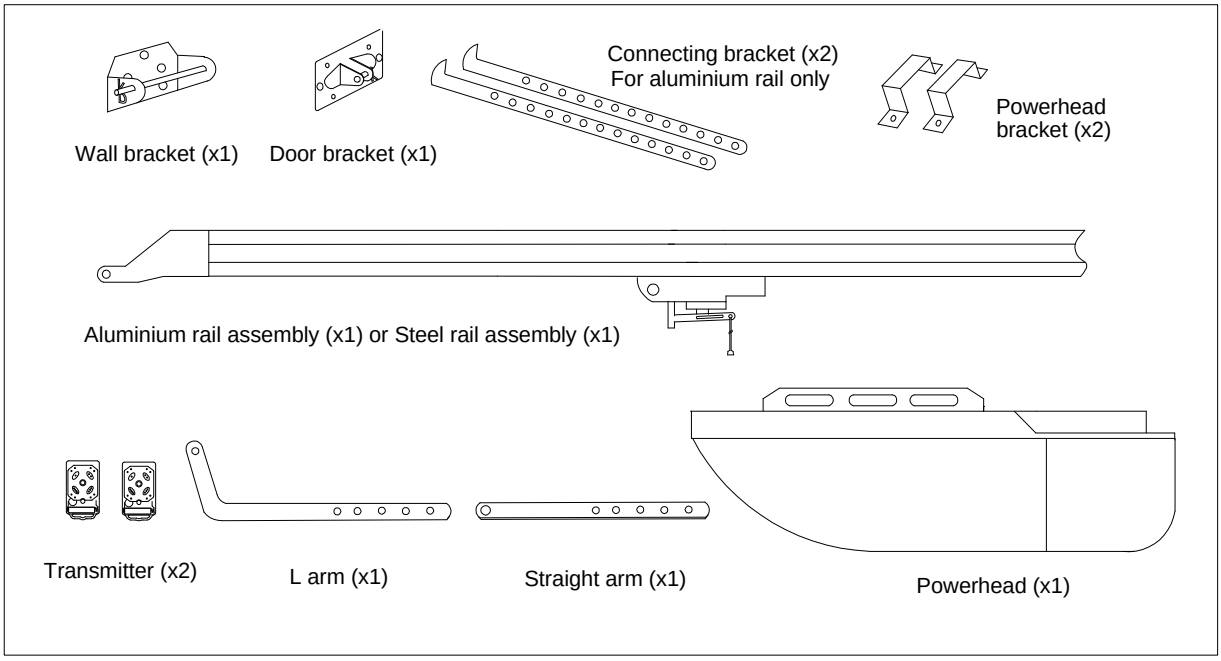
- The garage door operator is designed for residential overhead sectional and tilt doors. It operates on 240V AC.
- The operator memorizes the limit positions and unique braking system that slows the unit down at the end of its travel.
- Smart controller and encoder system. Rolling code transmitter.
- The operator is equipped with a manual release lever which allows manual operation of the door in case of power failure.
- The controller has a security LOCK function which prevents operation of the door from transmitter.

3. Technical specifications

Model	HG600	HG1000
Motor	24V DC 100W	24V DC 120W
Open & close force	600N	1000N
Max. door size	$10m^2$	$14m^2$
Power Input	220V~240VAC±10% 50Hz	
Courtesy light time	3 minutes	
Working temperature	-20℃ ~ 50℃	
Radio frequency	433.92MHz	
Transmitter type	Rolling code	
Transmitter battery	23A 12V Battery	
Bulb	220V~240V 25 watt E14 bulb	

4. Check

After receiving the product, you should make an unpack-inspection, in which you should check whether the product was damaged. If you have any problem please contact dealer.



Note: If the operator is equipped with steel rail, two pieces of connecting brackets are not included.

Fig.1

5. Installation and adjustment

Step1

- Check the door is in good working condition, manually open and close the door to make sure the door operates smoothly and freely.
- The door must be well balanced.
- Check to see if there is a solid frame in the wall above the center of the door.
- Close the door.
- Mark the centerline of the door using a pencil, and extend the line down to the door surface, then up the wall above the door.
- Check the installation height of the operator. Slowly open garage door and observe the highest point of door while moving. Close the door again and mark this highest point on the wall, mark a horizontal line across the vertical centerline around 40mm above the highest point. (Note: there should be 80mm space between this horizontal line to the ceiling. If there is not enough space, please use the max. height possible to allow the header bracket to be fitted properly.)
- Fit the header bracket to the wall above the door, the centerline of the door should align with the centerline of the bracket, The bottom edge of the bracket should align with the horizontal line. Then fix the header bracket with screws.

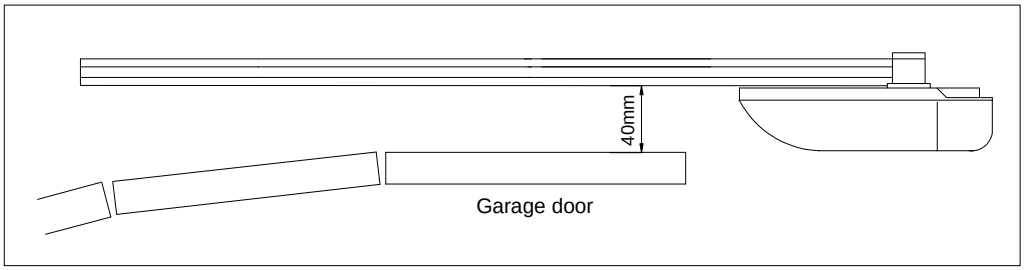


Fig.2

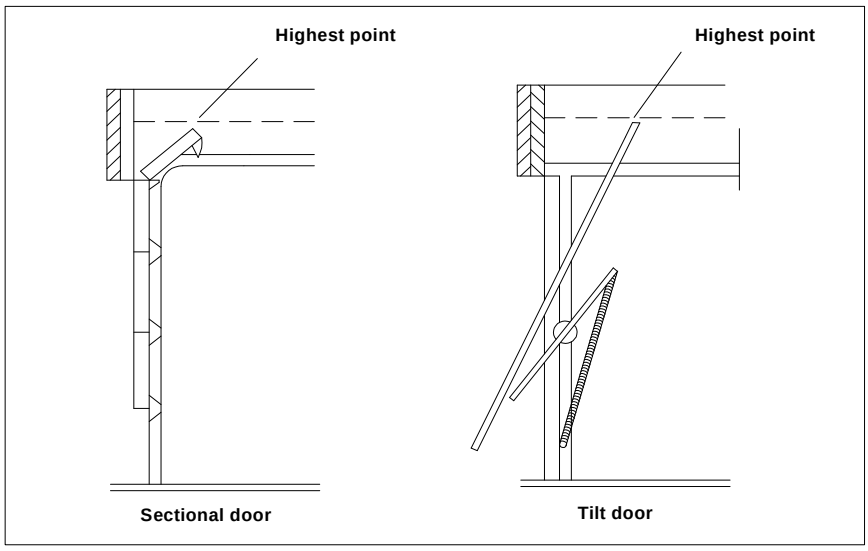


Fig.3

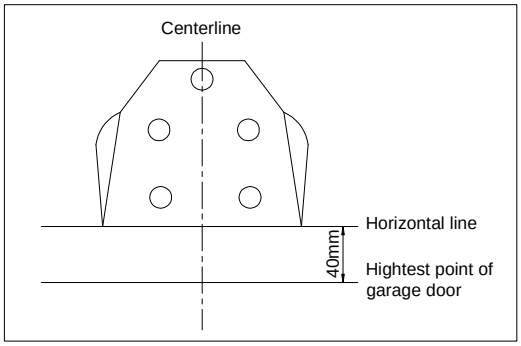


Fig.4

Step 2

- Aluminium rail (see Fig.5): insert the shuttle into the groove at the end of the rail. Be sure the release lever on the shuttle faces towards the powerhead. Slide the shuttle along the rail until it locks into the chain connector.
- Steel rail: the shuttle has been fixed into the rail before delivery.

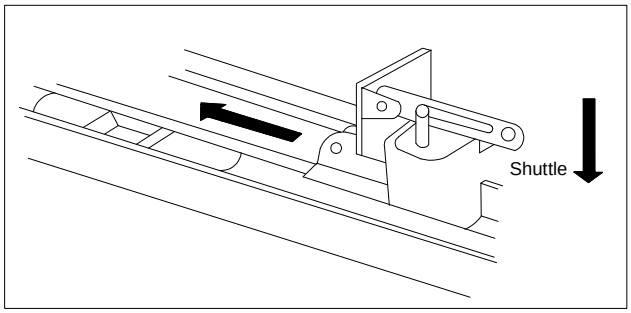


Fig.5 Aluminium rail

Step 3

- Place the powerhead on the floor, add cardboard packing to protect the powerhead from scratching by the floor. Attach the powerhead unit to the rail, make sure the spindle is inserted into the chain drive, then fix the two brackets (see Fig.6 and Fig.7).

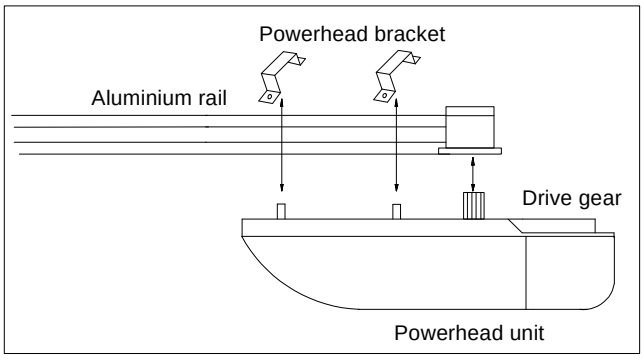


Fig.6 Aluminium rail

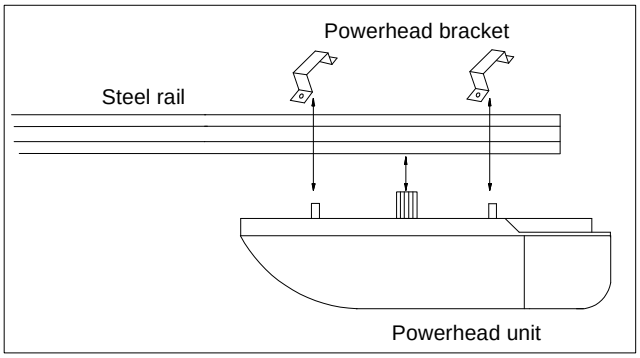


Fig.7 Steel rail

Step 4

- Close the door.
- Place the operator in the center of the floor. Lift the front end of the rail up to the header bracket, and fix it to the bracket with pivot pin and R pin.
- Raise and support the powerhead with a ladder and line up the tube with the centerline marked on the door. The rail must be level.

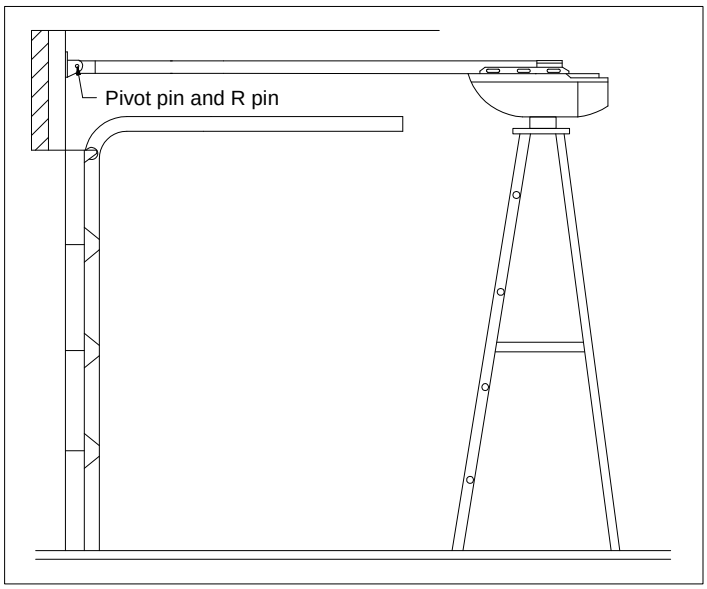


Fig.8

Step 5

Aluminium rail (See Fig.9): Locate two pieces of connecting brackets and make sure that the rail is level, then fix the aluminium rail to ceiling with supplied connecting brackets. If necessary, you also can add two pieces of brackets (not included in accessories) to fasten the operator firmly. Check the door does not touch any part of the rail by opening or closing it manually.

Steel rail (See Fig.10): fix the steel rail to ceiling with two pieces of brackets (not included in accessories).

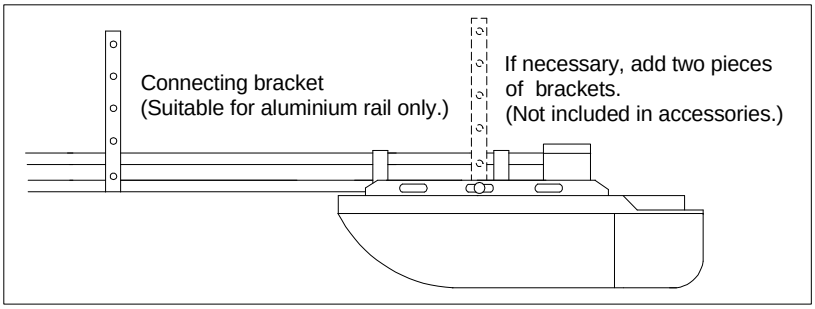


Fig.9 Aluminium rail

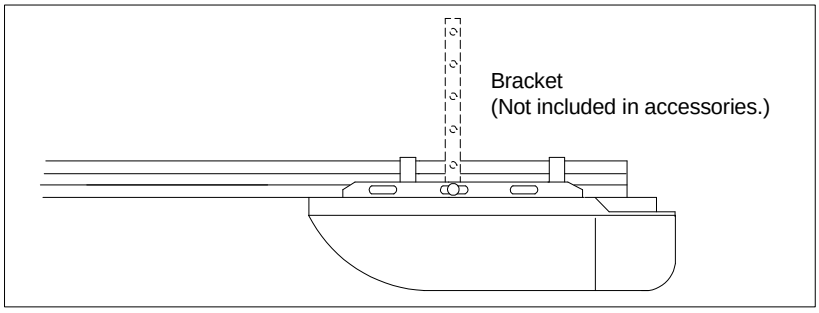


Fig.10 Steel rail

Step 6

Fix the door bracket on the top edge of the door with bolts. Link the L arm to the door bracket with pin and R pin. Link the straight arm to the shuttle with pin and R pin, ensure the door arm can be moved freely.

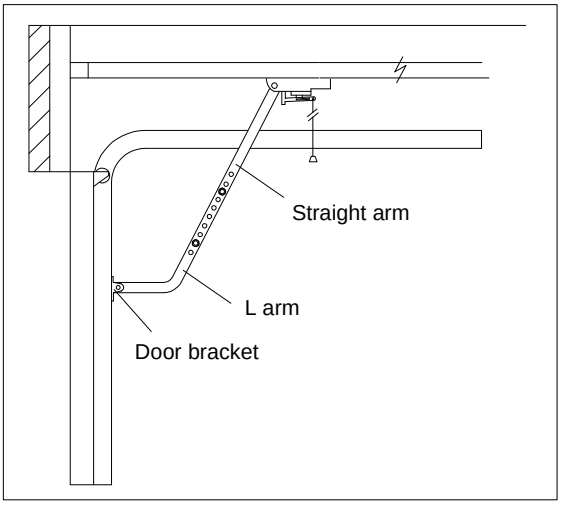


Fig.11

Manual operation

If the door has to be operated manually due to a power cut or malfunction of the automated system, pull the release rope, open and close the door manually. To reconnect the door, move the door by hand until it engages into the chain shuttle.

6. Programming

SET button: Mode set and Confirm function

LEARN button: Transmitter set and clear function

UP button: Up limit

DOWN button: Down limit

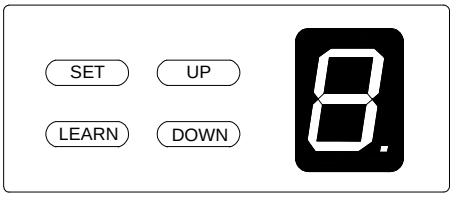


Fig.12

Adding extra transmitter (learn)

1. Press and hold **LEARN**, a dot is indicated on the LED display.
2. Press the transmitter button which you want to use (button 1, 2, 4), then press the same button again.
3. The dot on the LED display will flash then turn off.
4. '**||**' is indicated on the LED display, then the learning process is finished.

Up to 20 transmitters may be used.

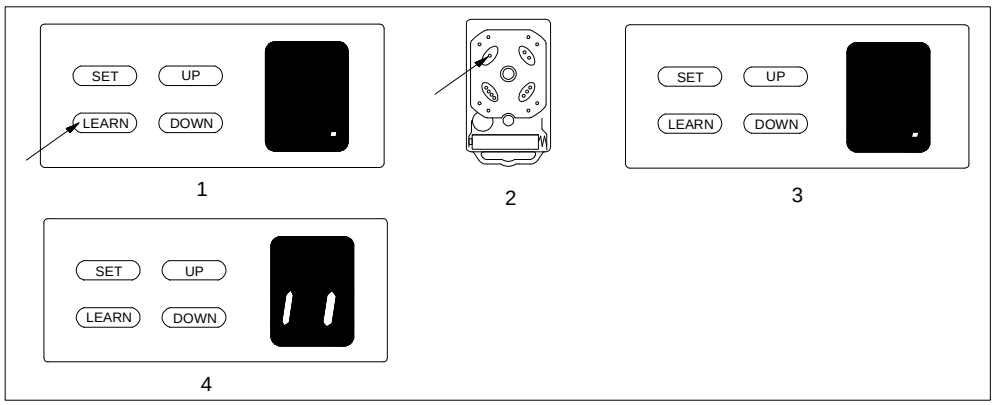


Fig.13

Erase transmitter

Press and hold **LEARN** until '**C**' flashes on the LED display. This indicates that all the transmitters have been erased completely.

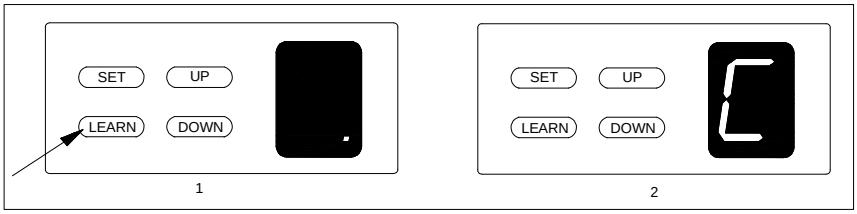


Fig.14

Set open and close positions

1. Press and hold **SET** until number '**1**' is indicated on the LED display.
2. Press and hold **UP** to set open position, release the button until the door has reached the desired position. (You also can press **DOWN** to move the door downward, **UP** and **DOWN** can be used to fine adjust the door position.)
3. Press the **SET** to confirm the open position, now number '**2**' is indicated on the LED display.
4. Press and hold **DOWN** to set close position, release the button until the door has reached the desired position. (You also can press **UP** to move the door upward, **UP** and **DOWN** can be used to fine adjust the door position.)
5. Press the **SET** to confirm the close position.
6. The door will do a complete open and close cycle.

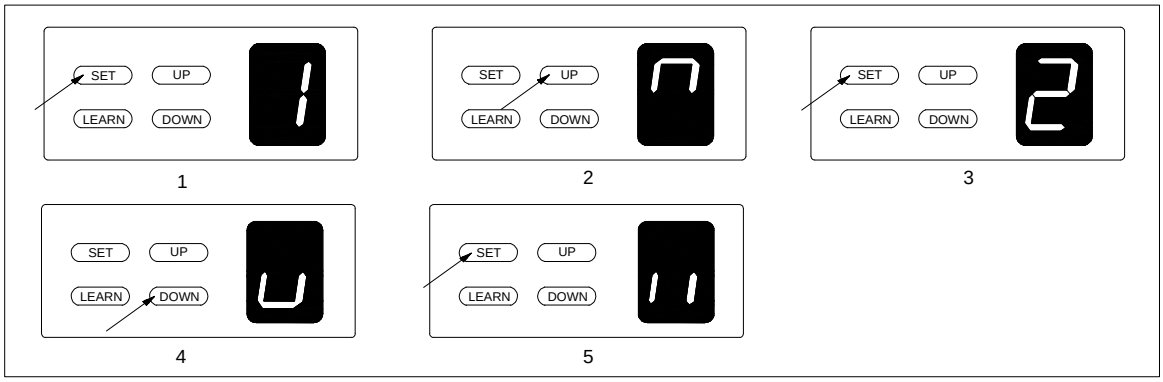


Fig.15

Automatic close (0~9 minutes adjustable)

1. Press and hold **UP** until '—' is indicated on the LED display.
2. Press **UP** to increase the auto close time, press **DOWN** to decrease time.
3. Set timer to '**0**', the automatic close function will disable.
4. Press **SET** to confirm the setting.

NOTE: Automatic close function is available only when the door is in fully opened position.

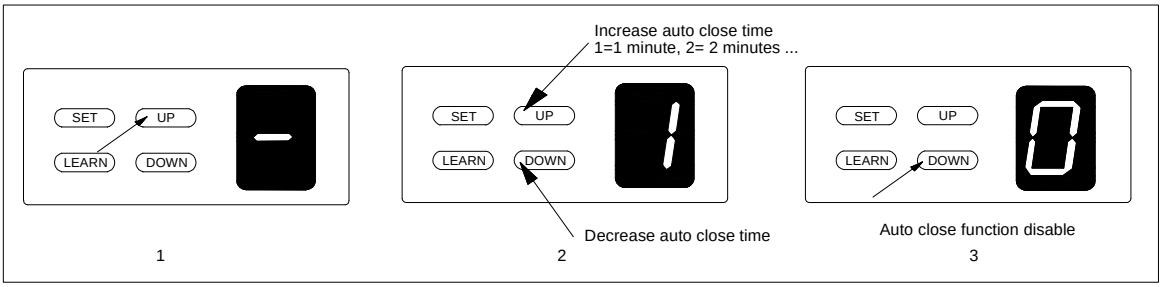


Fig.16

Setting obstruction force

If the door meet an obstruction during closing, it will stop and reverse about 15cm~20cm.

1. Press and hold **SET**. The LED will display number from '**1**' to '**4**', when the number '**3**' appears on the LED display, release the **SET**.
2. Press **UP** to increase the obstruction force, the maximum force is level 9. Press **DOWN** to decrease force, the minimum force is level 1.
3. Press **SET** to confirm.

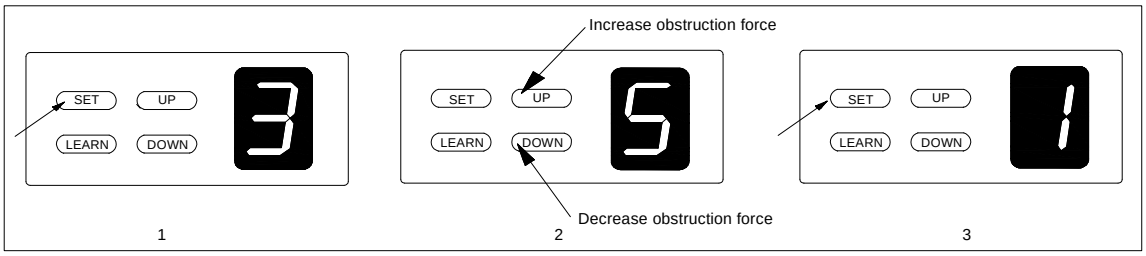


Fig.17

LOCK function

1. Press and hold **SET**. The LED will display number from '**1**' to '**4**', when the number '**4**' appears on the LED display, release **SET**.
2. Press **UP**, number '**1**' will be indicated on LED display, LOCK function enable.
3. Press **DOWN**, number '**0**' will be indicated on LED display, LOCK function disable.
4. Press **SET** to confirm.

NOTE: LOCK function is available only when the door is in fully closed position.

After setting LOCK function, the door locked, you need press button 3 of transmitter to unlock, then press the other buttons to operate the door.

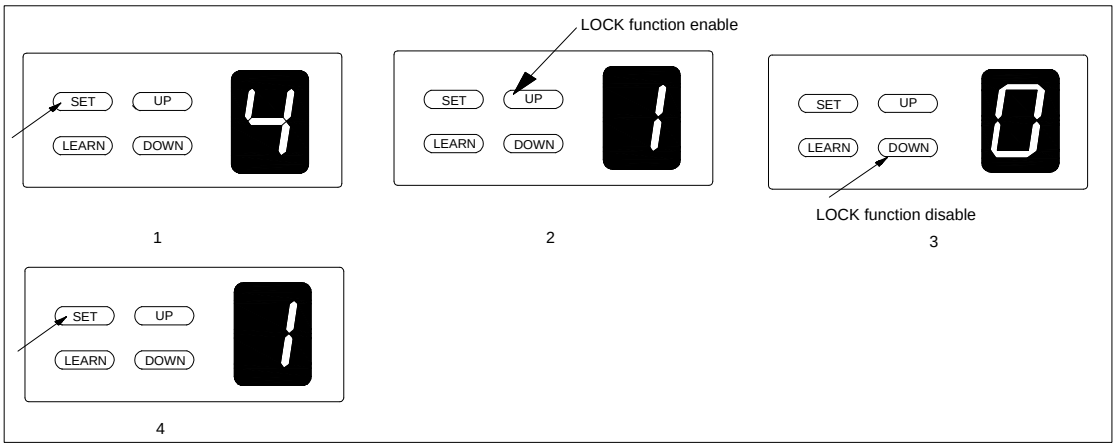


Fig.18

Infrared photocell

1. Press and hold **DOWN** until '—' is indicated on the LED display.
2. Press **UP**, '**H**' is indicated on the LED display, infrared photocell is enable.
3. Press **DOWN**, '**||**' is indicated on the LED display, infrared photocell is disable.
4. Press **SET** to confirm.

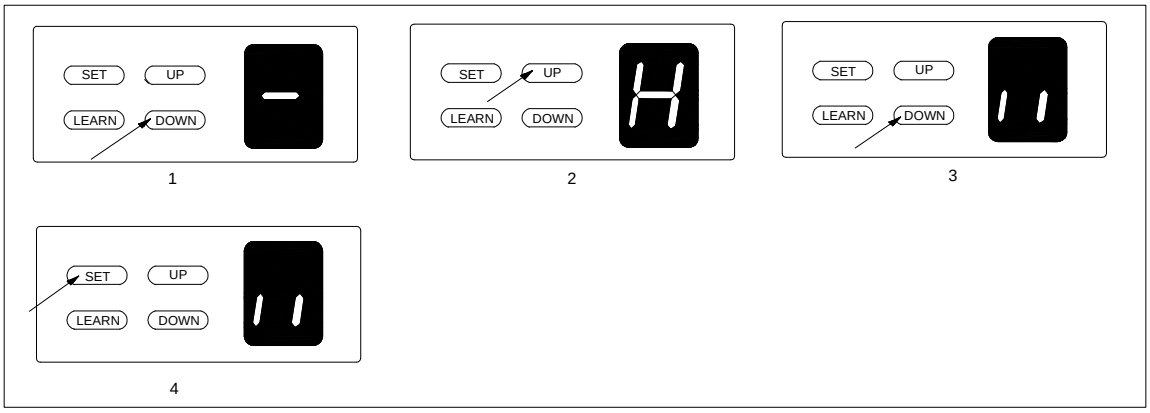


Fig.19

7. External terminal connection

PB: Wall switch (N.O.)

GND: Ground

PE: Photocell (N.C.)

+24V: 24V DC power output

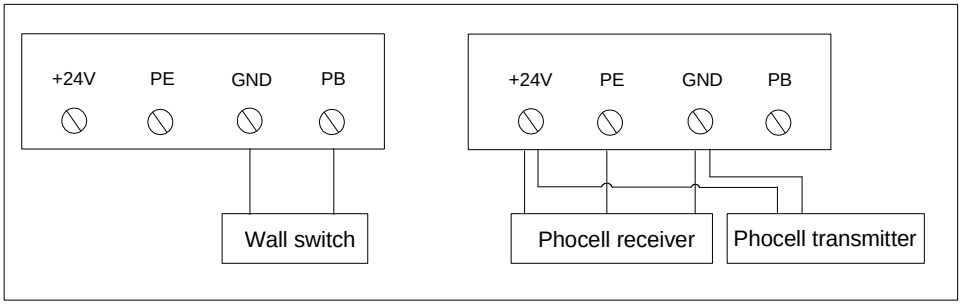


Fig.20

8. Maintenance

- Check the door once a month. The door should be carefully checked for balance. The door must be in good working order.
- The auto-reverse function should be regularly inspected, and adjusted if necessary. For service, call an experienced serviceman.
- We suggest for safety reasons, photocells be used on all gates.
- Disconnect from mains supply before replacing bulb.
- Be sure to read the entire manual before attempting to perform any installation or service to the door operator.
- Our company reserves the right to change the design and specification without prior notification.

9. Troubleshooting

Trouble	Possible causes	Solutions
The door fails to open and close. LED display does not light.	1. Power is OFF 2. Fuse blown	1. Make sure that power is ON. 2. Replace fuse.
The door can open, fails to close.	1. Infrared beam is obstructed. 2.Infrared photocell function is enable, but the photocell has not been installed.	1. Remove obstructions. 2.Make sure the infrared photocell function is disable.
Remote control does not work.	1. Battery level may be low, 2. Transmitter	1. Replace the battery inside the transmitter. 2.Re-program the transmitter.
The transmitter operating distance is too short.	Battery level may be low.	Replace battery.